

What is claimed is:

1 1. A computer-implemented method of providing
2 interactive links in TV programming, the method comprising:
3 receiving a TV signal including a graphic symbol;
4 generating an active region corresponding to the
5 graphic symbol; and
6 triggering a predetermined action associated with
7 the active region in response to viewer input.

1 2. The method of claim 1 wherein the received TV
2 signal comprises TV picture data having the graphic symbol
3 embedded therein.

1 3. The method of claim 1 wherein the graphic symbol
2 in the TV signal is specified by a broadcaster of the TV
3 signal.

1 4. The method of claim 1 wherein receipt of the TV
2 signal further comprises receiving information defining the
3 active region to be generated.

1 5. The method of claim 1 wherein receipt of the TV
2 signal further comprises receiving information defining the
3 predetermined action to be triggered.

1 6. The method of claim 1 wherein generation of the
2 active region corresponding to the graphic symbol comprises
3 generating a webpage having a link to a resource.

1 7. The method of claim 6 wherein the active region
2 is substantially in registration with the graphic symbol
3 received in the TV signal.

1 9. The method of claim 1 wherein the active region
2 roughly approximates the size, shape and/or location of the
3 received graphic symbol.

1 10. The method of claim 1 wherein the generated
2 active region is visually transparent to the viewer.

1 11. The method of claim 1 wherein the generated
2 active region is visible to the viewer.

1 12. The method of claim 11 wherein the visible
2 active region is translucent.

1 13. The method of claim 11 wherein the visible
2 active region enhances an appearance of the received graphic
3 symbol.

1 14. The method of claim 11 wherein the visible
2 active region serves as a visual cue to the viewer that the
3 active region is available.

1 15. The method of claim 1 wherein generation of the
2 active region comprises modifying an appearance of the
3 active region.

1 16. The method of claim 15 wherein the active
2 region's appearance is modified in response to the passage
3 of time.

1 17. The method of claim 15 wherein the active
2 region's appearance changes based on a current context.

1 18. The method of claim 17 wherein a first context
2 corresponds to a first state in which a set top device is
3 logged into an online service provider host system and a
4 second context corresponds to a second state in which the
5 set top device is not logged into the online service
6 provider host system.

1 19. The method of claim 15 wherein the active
2 region's appearance changes in response to an event.

1 20. The method of claim 19 wherein the event
2 comprises detecting that a viewer has indicated interest in
3 the active region.

1 21. The method of claim 19 wherein the event
2 comprises detecting that a viewer has selected the active
3 region.

1 22. The method of claim 15 wherein modification of
2 the active region's appearance comprises changing one or
3 more of the following visual characteristics of the active
4 region: transparency, translucency, color, shape, size or
5 location.

1 23. The method of claim 1 wherein the viewer input
2 that triggers the predetermined action comprises selection
3 of the active area.

1 24. The method of claim 1 wherein triggering the
2 predetermined action comprises accessing a resource linked
3 to the active region.

1 25. The method of claim 24 wherein the accessed
2 resource comprises one or more of the following: a webpage,
3 a text file, a sound file, an image file, a movie file, or a
4 3D world.

1 26. The method of claim 24 wherein the accessed
2 resource comprises a communications utility that enables the
3 viewer to communicate with others.

1 27. The method of claim 26 wherein the
2 communications utility comprises one or more of the
3 following: an email program, an instant messaging program,
4 or a chat program.

1 28. The method of claim 24 wherein the accessed
2 resource comprises a local function.

1 29. The method of claim 24 wherein the local
2 function comprises a TV or VCR control operation.

1 30. The method of claim 1 further comprising, prior
2 to triggering the predetermined action, modifying the
3 predetermined action associated with the active region.

1 31. The method of claim 30 wherein the
2 predetermined action is modified in response to the passage
3 of time.

1 32. The method of claim 30 wherein the
2 predetermined action is changed based on a current context.

1 33. The method of claim 32 wherein a first context
2 corresponds to a first state in which a set top device is
3 logged into an online service provider host system and a
4 second context corresponds to a second state in which the
5 set top device is not logged into the online service
6 provider host system.

1 34. The method of claim 30 wherein the
2 predetermined action is changed in response to an event.

1 35. The method of claim 34 wherein the event
2 comprises detecting an action performed by the viewer.

1 36. The method of claim 30 wherein modification of
2 the predetermined action comprises changing an address of a
3 link associated with the active region to specify a
4 different resource.

1 37. The method of claim 1 wherein the TV signal
2 includes a plurality of graphic signals within a TV frame.

1 38. The method of claim 37 further comprising
2 generating a separate active region for each graphic signal.

1 39. The method of claim 38 wherein each active
2 region has its own associated predetermined action.

1 40. The method of claim 38 further comprising
2 triggering a separate predetermined action for each active
3 region.

1 41. The method of claim 1 wherein information
2 defining the active region and/or the predetermined action
3 is received in during the vertical blanking interval of the
4 TV signal.

1 42. The method of claim 1 wherein information
2 defining the active region and/or the predetermined action
3 is specified prior to receiving the TV signal.

1 43. A system for providing interactive links in
2 television (TV) programming, the system comprising:
3 a set top device having communications links for
4 receiving computer network content or TV signals or both;
5 a monitor for displaying received computer network
6 content and TV signals, the TV signals including one or more
7 frames comprising an embedded graphic symbol;
8 an input device for receiving user input from a
9 viewer;
10 software instructions stored within the set top
11 device (i) for generating a webpage having an active region
12 corresponding to the graphic symbol, and (ii) for triggering
13 a predetermined action associated with the active region in
14 response to viewer input.

1 44. The system of claim 43 wherein the received TV
2 signals comprise TV picture data having the graphic symbol
3 embedded therein.

1 45. The system of claim 43 wherein the graphic
2 symbol in the TV signal is specified by a broadcaster of the
3 TV signal.

1 46. The system of claim 43 wherein the received TV
2 signals include information defining the active region to be
3 generated.

1 47. The system of claim 43 wherein receipt of the
2 TV signal further comprises receiving information defining
3 the predetermined action to be triggered.

1 48. The system of claim 43 wherein the software
2 instructions for generating the active region corresponding
3 to the graphic symbol comprise instructions for generating a
4 webpage having a link to a resource.

1 49. The system of claim 48 wherein the active
2 region is substantially in registration with the graphic
3 symbol received in the TV signal.

1 50. The system of claim 43 wherein the active
2 region is a same size and shape and at a same location as
3 the received graphic symbol.

1 51. The system of claim 43 wherein the active
2 region roughly approximates the size, shape and/or location
3 of the received graphic symbol.

1 52. The system of claim 43 wherein the generated
2 active region is visually transparent to the viewer.

1 53. The system of claim 43 wherein the generated
2 active region is visible to the viewer.

1 54. The system of claim 53 wherein the visible
2 active region is translucent.

1 55. The system of claim 53 wherein the visible
2 active region enhances an appearance of the received graphic
3 symbol.

1 56. The system of claim 53 wherein the visible
2 active region serves as a visual cue to the viewer that the
3 active region is available.

1 57. The system of claim 43 wherein the software
2 instructions for generating the active region comprise
3 instructions for modifying an appearance of the active
4 region.

1 58. The system of claim 57 wherein the active
2 region's appearance is modified in response to the passage
3 of time.

1 59. The system of claim 57 wherein the active
2 region's appearance changes based on a current context.

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1 60. The system of claim 59 wherein a first context
2 corresponds to a first state in which a set top device is
3 logged into an online service provider host system and a
4 second context corresponds to a second state in which the
5 set top device is not logged into the online service
6 provider host system.

1 61. The system of claim 57 wherein the active
2 region's appearance changes in response to an event.

1 62. The system of claim 61 wherein the event
2 comprises detecting that a viewer has indicated interest in
3 the active region.

1 63. The system of claim 61 wherein the event
2 comprises detecting that a viewer has selected the active
3 region.

1 64. The system of claim 58 wherein modification of
2 the active region's appearance comprises changing one or
3 more of the following visual characteristics of the active
4 region: transparency, translucency, color, shape, size or
5 location.

1 65. The system of claim 43 wherein the viewer input
2 that triggers the predetermined action comprises selection
3 of the active area.

1 66. The system of claim 43 wherein the software
2 instructions for triggering the predetermined action
3 comprise instructions for accessing a resource linked to the
4 active region.

1 67. The system of claim 66 wherein the accessed
2 resource comprises one or more of the following: a webpage,
3 a text file, a sound file, an image file, a movie file, or a
4 3D world.

1 68. The system of claim 66 wherein the accessed
2 resource comprises a communications utility that enables the
3 viewer to communicate with others.

1 69. The system of claim 68 wherein the
2 communications utility comprises one or more of the
3 following: an email program, an instant messaging program,
4 or a chat program.

1 70. The system of claim 66 wherein the accessed
2 resource comprises a local function.

1 71. The system of claim 70 wherein the local
2 function comprises a TV or VCR control operation.

1 72. The system of claim 43 further comprising
2 software instructions for modifying the predetermined action
3 prior to triggering.

1 73. The system of claim 72 wherein the
2 predetermined action is modified in response to the passage
3 of time.

1 74. The system of claim 72 wherein the
2 predetermined action is changed based on a current context.

1 75. The system of claim 74 wherein a first context
2 corresponds to a first state in which a set top device is
3 logged into an online service provider host system and a
4 second context corresponds to a second state in which the
5 set top device is not logged into the online service
6 provider host system.

1 76. The system of claim 72 wherein the
2 predetermined action is changed in response to an event.

1 77. The system of claim 76 wherein the event
2 comprises detecting an action performed by the viewer.

1 78. The system of claim 72 wherein the instructions
2 for modifying the predetermined action comprise instructions
3 for changing an address of a link associated with the active
4 region to specify a different resource.

1 79. The system of claim 43 wherein the TV signal
2 includes a plurality of graphic signals within a TV frame.

1 80. The system of claim 79 further comprising
2 instructions for generating a separate active region for
3 each graphic signal.

1 81. The system of claim 80 wherein each active
2 region has its own associated predetermined action.

1 82. The system of claim 80 further comprising
2 instructions for triggering a separate predetermined action
3 for each active region.

1 83. The system of claim 43 wherein information
2 defining the active region and/or the predetermined action
3 is received in during the vertical blanking interval of the
4 TV signal.

1 84. The system of claim 43 wherein information
2 defining the active region and/or the predetermined action
3 is specified prior to receiving the TV signal.

1 85. Computer software, tangibly embodied in a
2 computer-readable medium or in a propagated carrier signal,
3 for providing interactive links in television (TV)
4 programming, the software comprising instructions for
5 causing a computer system to perform the following
6 operations:

7 receive a TV signal including a graphic symbol;
8 generate an active region corresponding to the
9 graphic symbol; and

10 trigger a predetermined action associated with the
11 active region in response to viewer input.